

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

Summary Memorandum

Site ID: WA D009041450
County: Cowlitz
Priority Assessment: Medium
Backlog Red. Cat.:
Date/Revised: 1/22/85

Name and Location:

Weyerhaeuser Company
Chlor-Alkali Plant
3000 Industrial Way
Longview, WA 98632

Contact: Weyerhaeuser
Telephone: (206) 425-2150
Site Status: (X) Active () Inactive () Unknown

Site Description/TSD Activities:

The Weyerhaeuser Company operated a chlor-alkali plant which utilized the mercury cell process. Mercury-laden wastes were discharged into the Columbia River from 1956-70. After this, contaminated sludges were ponded in unlined pits which contaminated soils and potentially groundwater. WDOE supervised a cleanup of sludge ponds.

Waste Types/Quantities/Characteristics:

Approx. 93.5 lbs of mercury was lost from the chlor-alkali plant each day. Wastes contaminated with mercury and zinc were disposed of in sewers and directly into the Columbia River.

Physical/Social Environment:

Site overlies deep sandy loam and is located on the edge of the Columbia River. GW flow is towards the Columbia River; depth of GW is unknown. The chlor-alkali plant is located downstream in the same complex as a pulp mill and wood products plant owned by Weyerhaeuser. The site is located in an industrialized area.

Pollutant Mobilization/Pathways/Risk:

Soils, groundwater, and Columbia River sediments around the chlor-alkali site may be contaminated with mercury and zinc. The Columbia River acts as a barrier to contamination across the river to the north and pulls groundwater towards the river, eliminating concern for migration of contaminants to public drinking wells on either side.

Priority Assessment/Backlog Reduction Category:

Medium.

Followup Recommendations:

A complete sampling analysis of soils, groundwater, river sediments, and resident fish for mercury and zinc contamination should be affected in order to determine the extent of contamination at this site. If contamination is found to be extensive, this site may be considered for inclusion to the National Priority List.

USEPA SF



1457557

| POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT Part 1 - Site Information and Assessment | | | | | | I. IDENTIFICATION | |
|---|--|--|--|--|--|---|---|
| | | | | | | 01 State | 02 Site Number |
| | | | | | | WA | D009041450 |
| II. SITE NAME AND LOCATION | | | | | | | |
| 01 Site Name (legal, common, or descriptive name of site) Weyerhaeuser-Chlor-Alkali | | | | | 02 Street, Route No., or Specific Location Identifier 3000 Industrial Way | | |
| 03 City Longview | | | | | 04 State WA | 05 Zip Code 98632 | 06 County Cowlitz |
| 07 County Code 015 | | | | | 08 Cong Dist 03 | | |
| 09 Coordinates Latitude: 46 07 46 Longitude: 122 59 24 | | | | | Section/Township/Range Sec. 31, T8N, R2W, WM | | |
| 10 Directions to Site (starting from nearest public road) 3 miles from city of Longview, off of Washington Way. | | | | | | | |
| III. RESPONSIBLE PARTIES | | | | | | | |
| 01 Owner (if known) Weyerhaeuser Company | | | | | 02 Street (business, mailing, residential) Corporate Headquarters | | |
| 03 City Tacoma | | | | | 04 State WA | 05 Zip Code 98407 | 06 Telephone Number (206)9242345 |
| 07 Operator (if known and different from owner) Weyerhaeuser Company | | | | | 08 Street (business, mailing, residential) 3000 Industrial Way | | |
| 09 City Longview | | | | | 10 State WA | 11 Zip Code 98632 | 12 Telephone Number (206)4252150 |
| 13 Type of Ownership (check one) <input checked="" type="checkbox"/> A. Private <input type="checkbox"/> B. Federal: <input type="checkbox"/> C. State <input type="checkbox"/> D. County <input type="checkbox"/> E. Municipal <input type="checkbox"/> F. Other: <input type="checkbox"/> G. Unknown | | | | | | | |
| 14 Owner/Operator Notification on File (check all that apply) <input checked="" type="checkbox"/> A. RCRA 3001, Date Rec'd: 08/18/80 <input type="checkbox"/> B. Uncontrolled Waste Site (CERCLA 103c), Date Rec'd: / / <input type="checkbox"/> C. None | | | | | | | |
| IV. CHARACTERIZATION OF POTENTIAL HAZARD | | | | | | | |
| 01 On Site Inspection By (check all that apply): <input checked="" type="checkbox"/> Yes, Date: 70 -- 76 <input checked="" type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA Contractor <input checked="" type="checkbox"/> C. State <input type="checkbox"/> D. Other Contractor <input type="checkbox"/> No <input type="checkbox"/> E. Local Health Official <input type="checkbox"/> F. Other: Contractors Name(s): | | | | | | | |
| 02 Site Status (check one) <input checked="" type="checkbox"/> A. Active <input type="checkbox"/> B. Inactive <input type="checkbox"/> C. Unknown | | | | | 03 Years of Operation beginning year ending year 1956 Pres <input type="checkbox"/> Unknown | | |
| 04 Description of Substances Possibly Present, Known, or Alleged Potential contamination of soils, river sediments, and groundwater with mercury and zinc. | | | | | | | |
| 05 Description of Potential Hazard to Environment and/or Population Chlor-Alkali plant utilized mercury cell process. Mercury-laden waste was discharged into the Columbia River until 1970. After this, sludges were ponded in unlined pits contaminating soils and, potentially, groundwater also. The sludge ponds were excavated in a cleanup overseen by WDOE. | | | | | | | |
| V. PRIORITY ASSESSMENT | | | | | | | |
| 01 Priority for Inspection (check one; if high or medium is checked, complete Part 2 and Part 3) <input type="checkbox"/> A. High (inspection required promptly) <input checked="" type="checkbox"/> B. Medium (inspection required) <input type="checkbox"/> C. Low (inspect on time available basis) <input type="checkbox"/> D. None (no further action needed complete current disposition form) | | | | | | | |
| VI. INFORMATION AVAILABLE FROM | | | | | | | |
| 01 Contact Mike Gallagher | | | 02 Of (agency/organization) WDOE | | | 03 Telephone Number (206) 4596516 | |
| 04 Person Responsible for Assessment Suzanne Milham | | | 05 Agency WDOE | | 06 Organization Rem. Act. Div. | | 07 Telephone Number (206) 4596417 |
| | | | | | 08 Date 01/22/ 85 | | |

**POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
Part 2 - Waste Information**

I. IDENTIFICATION

| | |
|----------|----------------|
| 01 State | 02 Site Number |
| WA | D009041450 |

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

| | | |
|---|--|--|
| 01 Physical States (check all that apply) <input type="checkbox"/> A. Solid <input checked="" type="checkbox"/> E. Slurry <input type="checkbox"/> B. Powder, Fines <input type="checkbox"/> F. Liquid <input checked="" type="checkbox"/> C. Sludge <input type="checkbox"/> G. Gas <input type="checkbox"/> D. Other: | 02 Waste Quantity at Site (measures of waste quantities must be independent) Tons: Unk. Cubic Yards: Unk. No. of Drums: Unk. | 03 Waste Characteristics (check all that apply) <input checked="" type="checkbox"/> A. Toxic <input type="checkbox"/> E. Soluble <input type="checkbox"/> I. Highly Volatile <input type="checkbox"/> B. Corrosive <input type="checkbox"/> F. Infectious <input type="checkbox"/> J. Explosive <input type="checkbox"/> C. Radioactive <input type="checkbox"/> G. Flammable <input type="checkbox"/> K. Reactive <input checked="" type="checkbox"/> D. Persistent <input type="checkbox"/> H. Ignitable <input type="checkbox"/> L. Incompatible <input type="checkbox"/> M. Not Applicable |
|---|--|--|

III. WASTE TYPE

| Category | Substance Name | 01 Gross Amount | 02 Unit of Measure | 03 Comments |
|----------|-------------------------|-----------------|--|-------------|
| SLU | Sludge | | | |
| OLW | Oily Waste | | | |
| SOL | Solvents | | | |
| PSD | Pesticides | | | |
| OCC | Other Organic Chemicals | | | |
| IOC | Inorganic Chemicals | | | |
| ACD | Acids | | | |
| BAS | Bases | | | |
| MES | Heavy Metals | 93.5 | lbs/day mercury, lost to rvr, soils, swr | |

IV. HAZARDOUS SUBSTANCES (see Appendix for most frequently cited CAS numbers)

| 01 Cat. | 02 Substance Name | 03 CAS Number | 04 Storage/Disposal Method | 05 Concentration | 06 Measure of Concentration |
|---------|-------------------|---------------|----------------------------|------------------|-----------------------------|
| MES | Mercury | 7439976 | Sewer, pond, dis- | Unknown | N/A |
| MES | Zinc | 7440666 | charge into river | Unknown | N/A |
| MES | Magnesium | 7439954 | | Unknown | N/A |
| MES | Barium | 7440393 | | Unknown | N/A |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

V. FEEDSTOCKS (see Appendix for CAS numbers)

| Category | 01 Feedstock Name | 02 CAS Number | Category | 01 Feedstock Name | 02 CAS Number |
|----------|-------------------|---------------|----------|-------------------|---------------|
| FDS | | | FDS | | |
| FDS | | | FDS | | |
| FDS | | | FDS | | |
| FDS | | | FDS | | |

VI. SOURCES OF INFORMATION (cite specific references, e.g., state files, etc.)

WDOE Industria section files.
 WDOE SWRO Files
 EPA water discharge reports 1970

**POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT**
Part 3 - Description of Hazardous Conditions & Incidents

I. IDENTIFICATION

| | |
|-----------------------|-------------------------------------|
| 01 State WA | 02 Site Number D009041450 |
|-----------------------|-------------------------------------|

II. HAZARDOUS CONDITIONS AND INCIDENTS

- | | |
|---|--|
| <p>01 (X) A. Groundwater Contamination</p> <p>03 Population Potentially Affected: Unknown</p> <p>Mercury-contaminated wastes (sludge, liquid) were stored in unlined pits dug in the sand near the Columbia River, rapid migration through the sand is expected to have potentially contaminated groundwater. Groundwater flow is towards the Columbia River, depth of groundwater unknown.</p> | <p>02 () Observed (Date:) (X) Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) B. Surface Water Contamination</p> <p>03 Population Potentially Affected: Unknown</p> <p>Mercury-contaminated outfall from plant went directly into the Columbia River. Approximately 93.5 lbs/day Hg was lost from the plant. The Columbia is used for fishing and there is a boat launch 1/4 mile downstream from the site.</p> | <p>02 () Observed (Date: '56-'70,) () Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) C. Contamination of Air</p> <p>03 Population Potentially Affected: 0</p> <p>Emissions from the Weyerhaeuser site include those from the pulp mill located there. The chlor-alkali plant itself doesn't contribute significantly to air contamination.</p> | <p>02 () Observed (Date:) () Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) D. Fire/Explosive Conditions</p> <p>03 Population Potentially Affected: 0</p> <p>No significant fire hazard or explosion threat is indicated by local fire authorities.</p> | <p>02 () Observed (Date:) () Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) E. Direct Contact</p> <p>03 Population Potentially Affected: 0</p> <p>The Weyerhaeuser site is secured by fences, however there is a public boat launch 1/4 mile directly downstream from the site.</p> | <p>02 () Observed (Date:) (X) Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) F. Contamination of Soil</p> <p>03 Area Potentially Affected (acres): 100 Ac.</p> <p>Hg contamination of medium sandy loam, well draining soils permeability >20"/minute. Contamination from holding pond seepage, contamination of river bottom sand and sediments. The slope gradient from the site is towards the river.</p> | <p>02 (X) Observed (Date: '70-'76,) () Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) G. Drinking Water Contamination</p> <p>03 Population Potentially Affected: Unknown</p> <p>The Columbia River channel protects drinking water on the south side of the site. Longview utilizes a municipal water system supplied from a reservoir 3 miles north of the Chlor-Alkali plant.</p> | <p>02 () Observed (Date:) (X) Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) H. Worker Exposure/Injury</p> <p>03 Workers Potentially Affected: 0</p> <p>The Weyerhaeuser site no longer uses the mercury cell process. Present employees would not be exposed to mercury, although the present process utilizes caustics and other potentially hazardous materials regulated by Labor and Industries.</p> | <p>02 () Observed (Date:) () Potential () Alleged</p> <p>04 Narrative Description</p> |
| <p>01 (X) I. Population Exposure/Injury</p> <p>03 Population Potentially Affected: Unknown</p> <p>Any use of the Columbia River for fishing, swimming, etc. could lead to exposure to mercury-laden sediments. Fish eaten from this area could have bioaccumulations of mercury and/or zinc.</p> | <p>02 () Observed (Date:) (X) Potential () Alleged</p> <p>04 Narrative Description</p> |

**POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT**
Part 3 - Description of Hazardous Conditions & Incidents

I. IDENTIFICATION

01 State

02 Site Number

WA

D009041450

II. HAZARDOUS CONDITIONS AND INCIDENTS (continued)

01 (☒) J. Damage to Flora 02 () Observed (Date:) (☒) Potential () Alleged

04 Narrative Description

Mercury discharges into the Columbia River may affect or be stored by plants growing in contaminated sediments and animal life.

01 (☒) K. Damage to Fauna 02 () Observed (Date:) (☒) Potential () Alleged

04 Narrative Description (include name[s] of species)

See J above.

01 (☒) L. Contamination of Food Chain 02 () Observed (Date:) (☒) Potential () Alleged

04 Narrative Description

Mercury is known to bioaccumulate and biomagnify.

01 (☒) M. Unstable Containment of Wastes 02 (☒) Observed (Date: 1970) () Potential () Alleged
(spills/runoff/standing liquids/leaking drums)

03 Population Potentially Affected: UNKNOWN 04 Narrative Description

1970 WDOE report: mercury sludges and other wastes stored in unlined pits scooped out of sandy river deposits. Observed seepage into ground.

01 (☒) N. Damage to Offsite Property 02 () Observed (Date:) (☒) Potential () Alleged

04 Narrative Description

No record of damage to off-site property, potential exists for off-site contamination of any nearby wells and of river sediments.

01 (☒) O. Contamination of Sewers, Storm Drains, WWTPs 02 (☒) Observed (Date: 56-70) () Potential () Alleged

04 Narrative Description

Cooling water, condensate contaminated with mercury was released into sewer system. All mercury-contaminated waste streams were sewered prior to ~~1970~~ 1970

01 (☒) P. Illegal/Unauthorized Dumping 02 (☒) Observed (Date: 56-70) () Potential () Alleged

04 Narrative Description

There are many documented violations of water discharge standards of excess mercury and zinc (SWRO, DOE inspection reports). Until 1970, there was no regulation of mercury or zinc usage or disposal at site.

05 Description of Any Other Known, Potential, or Alleged Hazards

No other hazards known.

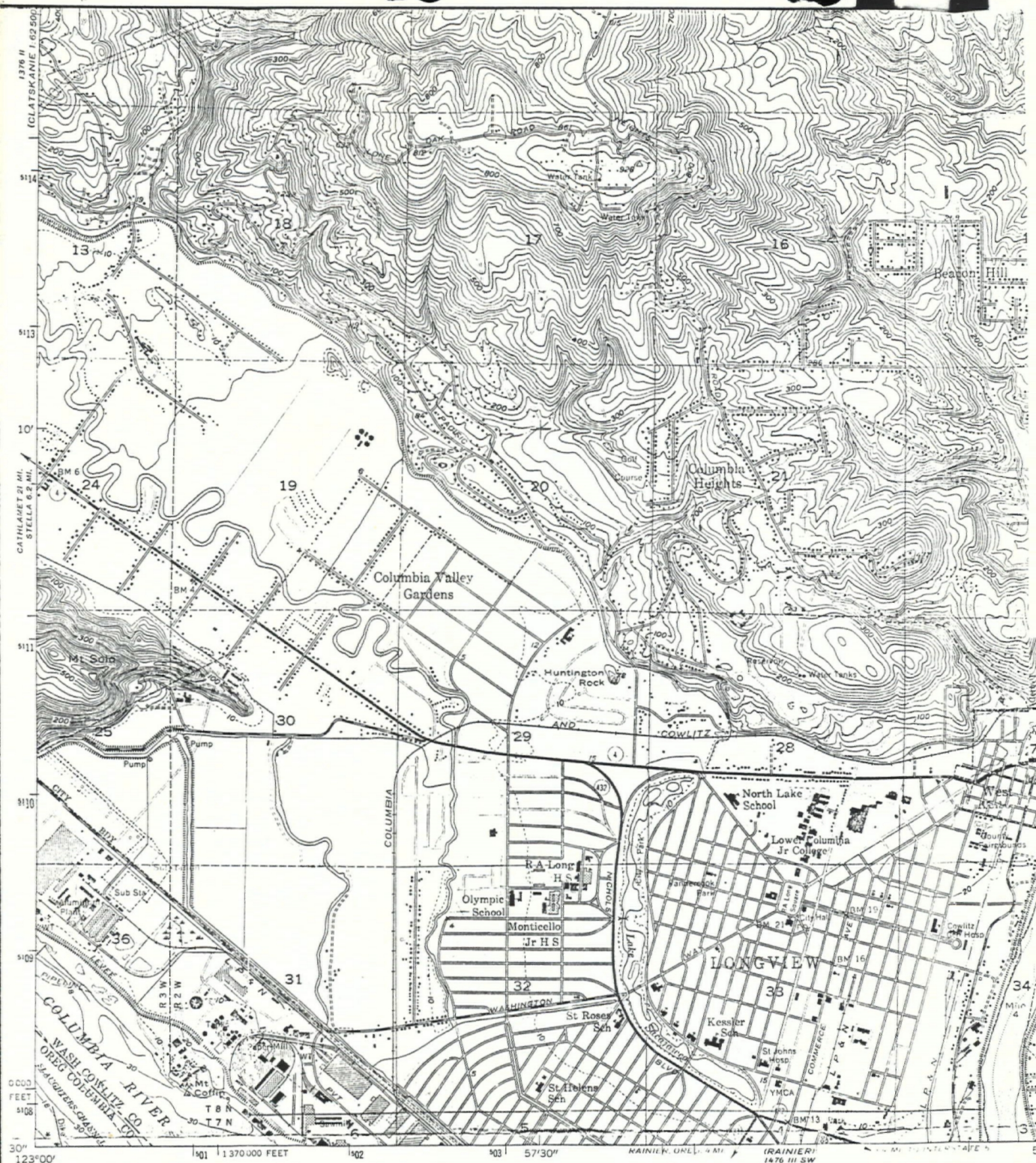
III. TOTAL POPULATION POTENTIALLY AFFECTED: Unknown

IV. COMMENTS

Although a cleanup of gross mercury contamination of holding ponds was completed in 1975-76, previous contamination of soils, groundwater, and Columbia River bottom sediments over a 20-year period warrant further investigation.

V. SOURCES OF INFORMATION (cite specific references: state files, reports, etc.)

NPDES No. 0000124 ; NPDES No. 0037672;
WDOE/SWRO Files; WDOE Industrial Section Files, maps;



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by Kelsh plotter methods and by plane-table surveys 1930 and 1953. Aerial photographs taken 1951

Hydrography compiled from USC&GS Chart 6153

Polyconic projection. 1927 North American datum 10,000-foot grid based on Washington coordinate system, south zone

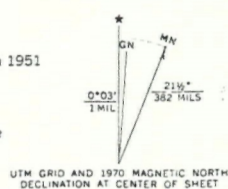
Dashed land lines indicate approximate locations

Unchecked elevations are shown in brown

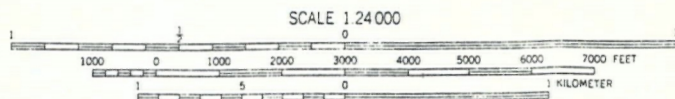
Red tint indicates areas in which only landmark buildings are shown

1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

Purple tint indicates areas of urban areas



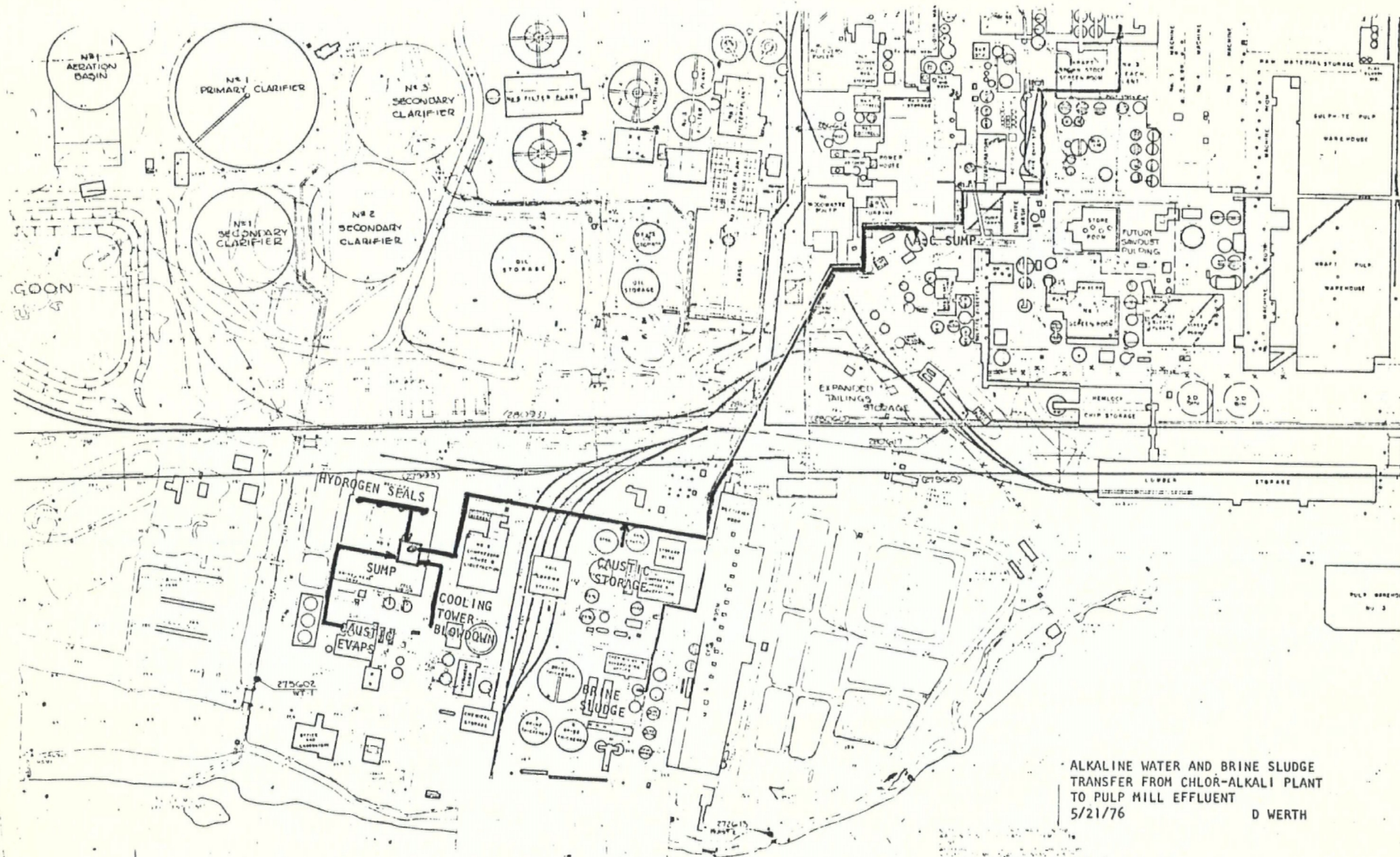
UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 20 FEET
DASHED LINES REPRESENT HALF INTERVAL CONTOURS
DATUM IS MEAN SEA LEVEL

DEPTH CURVES IN FEET—COLUMBIA RIVER DATUM
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 5 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DEPT. OF THE INTERIOR, COLORADO 80225, OR WASHINGTON, D. C. ;
A FOLDER DESCRIBING TOPOGRAPHIC SYMBOLS AND SYMBOLS IS AVAILABLE ON REQUEST



ALKALINE WATER AND BRINE SLUDGE
TRANSFER FROM CHLOR-ALKALI PLANT
TO PULP MILL EFFLUENT
5/21/76 D WERTH